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ABSTRACT

The point is made that educational research must become classroom-oriented instead of remaining university-oriented. The suggested manner of accomplishing this is to focus on the development of inservice teachers into practicing educational researchers as part of a staff improvement program. Case studies of a New Hampshire junior high school's inservice research program, which has also led to significant staff development, are cited. A bibliography is appended. (LH)

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INSERVICE EDUCATION: COLLABORATIVE ACTION RESEARCH AND TEACHER EMANCIPATION

UNH/Portsmouth Teacher Corps Project

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Fifty years ago educational researchers and teachers collaborated at all levels of the research enterprise. Many of the educational researchers, during the 1920's and 1930's, were classroom teachers and/or school administrators (Chall, 1975). Studies in that progressive era were conducted on practical concerns of the teachers and the schools. The collaboration between researchers and practitioners went even further with joint authorship of journal articles, research monographs, and books. Furthermore, they were meant to be and were read not by researchers alone but by practicing classroom teachers. Goodlad and his associates in their book, Behind the Classroom Door (1970), suggest that innovations in schools do not generally come about from the usual kind of dissemination of research findings but come only when teachers and administrators seek to find solutions to their own problems. They recommend that research and development should start in a school with the teachers and administrators in that school and not with the university based educational researcher.

Patricia Graham (1979), the director of the National Institute of Education, indicates that one of the critical problems which has contributed to the low esteem of educational research is in the selection of significant topics for study. She cites two reasons for this condition: "focusing attention on the societal outcomes of schooling has diverted attention from more basic issues in education, and our search for disciplinary rigor has led us to limit our choices of problems to those suited to our research

strategies and methodologies." The NEA (1979) adds a third reason - i.e. topics are traditionally identified by members of the research establishment and not by classroom teachers who work with students every day and see firsthand what interferes with teaching and learning.

The successful adaption and generation of research hinges on the fundamental principle that those people to be most affected by change and innovation must participate with full parity in all the decisions which will affect their transformation. The full implementation of this principle signals a call for the renewal of action research as a collaborative process and the recognition of action research as a valuable mode of inservice education.

Action research is staff development. The processes of adapting research and conducting school problem centered research constitute effective and meaningful inservice education. Inservice education needs to be reconceptualized to recognize that in addition to credit courses, workshops, instructional modules, and professional conferences, important learning and growth occurs when teachers adapt research and carry out research to solve problems that concern them. We have not been successful in implementing research in our schools because by and large research findings have been generated by university or foundation based researchers who have no real connection with the daily life of the schools. The problem of getting teachers involved in research adaption and generation can be addressed if we adopt the model of collaborative action research as a form of inservice education.

Traditional research has been a technological process responsive to the catalytic action of educational researchers who keep the locus of decisions outside the school and away from teachers. This approach prevents

the school as a learning community and the teachers in the school from becoming the subject of their own transformation. Freire (1973) insists that methodological failings can always be traced to ideological errors. Behind the practice of traditional experimental research in education is an implicit ideology of paternalism, social control, and non-reciprocity between experts and "helpees." (In the traditional research study one finds "subjects" - interesting language which suggests that someone mu . be the "ruler" or the manipulator). If one is to adopt the collaborative action research model which fosters dialogue and reciprocity, one must first be ideologically committed to equality, to the abolition of privilege, and to non-elitist forms of research leadership wherein special qualifications may be exercised but are not perpetuated.

Collaborative action research focuses on the involvement of those who are traditionally "researched" in the identification of problems, the formulation and collection of data, the interpretation of information, and the application of findings to solving problems. Collaborative action research answers the question of who has the right to create knowledge by arguing that the expected beneficiaries of research should design and carry out their own research. There are three assumptions underlying this approach: 1) parity in decision making among researchers, trainers/developers, and practitioners; 2) respect for the unique perspective of each constituency; and 3) equal assumption of responsibility among each participant in the collaborative research and theory development process (Mergendoller, 1979).

A collaborative research process can be of immediate and direct benefit to a school and its constituents. It is important that the school and the community gain not only from the <u>results</u> of research, but from the <u>process</u> itself. This means, for example, that teachers, students, and members of the community --- as a result of participating in the research process will

be more able to articulate problems themselves and to initiate processes to find solutions. The fundamental principle of collaborative participatory research and its point of most radical departure from orthodox research is that the research process is based on a system of discussion, investigation, and analysis in which the researched are as much a part of the process as the researcher. Theories are neither developed beforehand to be tested nor drawn by the researcher from his or her involvement with reality. Reality is described by the process through which a school, a community, and its teachers, parents, and children develop their own theories and solutions about themselves and their situation (Hall, 1977).

Knowledge is power. A research process which allows for teachers to function as researchers and develops increased capacities of analysis makes new educational change actions possible, develops critical consciousness and helps teachers become more powerful.

The school is the best laboratory for research. In one school building there probably are more real researchable problems deserving the support and attention of funding agencies than we can imagine. Jackson (1968) says that the classroom teacher typically engages in as many as 1,000 interpersonal exchanges during the course of a six-hour day, frequently averaging 200-300 interpersonal transactions per hour. This observation in itself testifies to the complexity and immediacy of the daily situation in which every teacher is forced to make decisions. A single school is a research goldmine in terms of important questions, variety and richness of data, and numbers of potential researchers. Through inservice education teachers can develop the skills, attitudes, and confidence to function as researchers. One way to encourage teachers to carry out research on their own problems is to support released time so that teachers can reflect on what they do and what they want to do.

Another way to encourage teacher research is to publish teachers' work. (Phi Delta Kappa has begun to do this with its publication, Practical Applications of Research). And still another way is to get teachers to see that research is a form of intellectual inquiry and problem solving and not necessarily a process to be equated with experimental design.

McKenna (1978) observes that teaching becomes the most meaningful and productive when teachers regularly and systematically ask themselves why they do what they do and extend that inquiry to assessing the outcomes of the "what." All too often, if and when teachers do these things, they do them solo - behind closed doors with a classroom full of students to be concerned about at the same time they ask and attempt to answer the profound questions of "why?," "What," and "To What Ends." There is great promise in the pursuit of inquiry with the collaboration and support of others who have much to contribute to the solution of classroom problems and to the evaluation of the success of instructional practice -- particularly researchers and university faculty. The idea of such collaborative efforts has been discussed by Schaefer in his book, The School as a Center of Inquiry, and was demonstrated in the 1940's by Stephen Corey and others at Teachers College, Columbia University in action research projects which brought together teachers and professors primarily for curriculum development purposes.

Teacher oriented inquiry and the view of the school and the classroom as the places where the research action is will come about when researchers and teachers change their attitudes and perceptions about inquiry and research. McKenna (1978, p.2) speaks clearly to this point:

> "---many researchers will have to revise their posture that scholars mustn't get their hands dirty with the clay; that the potting must be done by others, once the scholars have

prescribed the clay mix and kiln temperature. More specifically, the attitude that you can't learn much in the "messy" situation of the ordinary classroom will need to be replaced with one that accepts real schools as the most appropriate places for conducting research and development. And researchers will need to come to recognize teachers as peers, as colleagues, who have much to contribute to improving the R&D process, from identifying researchable issues, determining research design, data gathering and analysis, to planning programs based on findings. Once these are accomplished, new strategies for conducting research may need to be devised and tested in order to inquire into the multidimensional problems that are identified for study.

Teachers on their part will need to reconceptualize their roles to include involvement in inquiry and problem solving on instructional issues. And they will need to gain confidence in their ability to contribute on a parity basis to the research and development process."

There are certain necessary conditions which need to be built into the working environment of the schools if teachers are going to function as researchers in partnership with university researchers.

1) Time needs to be made available as part of the teacher's regular teaching load for discussion, reflection, investigation, and speculation.

2) An atmosphere is required in which teachers have the freedom to identify and initiate their own problems for inquiry, to express their ideas and develop their ideas into hypotheses, and to share and defend their ideas with administrators and colleagues.

3) Technical assistance and support and consulting services ought to be provided when necessary to help teachers (and university faculty) learn field based research processes.

4) Reasonable material support for carrying out research and adapting research findings should be available.

5) University credit, staff development credit, or inservice credit should be given to teachers for conducting research if they desire it.

6) Alternative methodologies for conducting research in the schools need to be encouraged and taught. Ethnomethodological approaches (Mehan and Wood, 1975 and Carini, 1975) and retrospective analyses (Wise, 1977) seem to be very valuable methodologies for conducting research in site specific field based programs.

We need to emancipate ourselves from the straight jacket of experimental design and recognize that good research can be conducted in many different ways. Good research requires common sense. With some training in participatory/observational techniques, case study approaches, the use of audio/video taping systems, personal journals, record keeping, and documentation techniques, teachers in partnership with university faculty can bring about a renaissance of school based research which characterized the Progressive Era in education and contributed major ideas and practices to the education of children.

It is important that university faculty recognize the rich opportunities they have through involvement in field based inservice education programs for generating research and scholarship to meet their institutions' promotion and tenure requirements. Involvement in field based inservice education is not irreconcilable with qualitative research. Indeed, for the many reasons referred to earlier in this article the school with all its complexities, problems, and changing dynamics offers the best chances for university faculty, in partnership with classroom teachers, to produce significant and lively scholarship.

To seize the opportunities available for research in field based inservice education, university faculty may need to learn how to conduct field based research and certainly will need to change their attitudes about the nature and character of research. The question of research and promotion

and tenure in relation to field based activity is not a simplistic either-or issue as it all too often has been defined. The question needs to be redefined. The issue at hand is how vested personal and institutional interests can be merged in field based research to serve all the parties involved in a collaborative effort to improve learning for children.

Action Research: Case Studies

The tradition of the research establishment is hard to change. Too easily, teachers become consultants to rather than full participants in the research process. Too easily, the researcher becomes the sole originator of the research while the practitioner becomes simply the object of study rather than an investigator as well. If teachers are to be full partners in research, they must be coinvestigators who share with researchers the responsibility for the design and execution of the research and for the interpretation and dissemination of the results (Gajewski, 1979).

Collaborative action research empowers and emancipates teachers by helping them to help themselves, by placing them in consciously critical confrontation with their problems, and by making them agents of their own change.

Collaborative action research is alive and well at Portsmouth Junior High School where a number of teachers, through the UNH-Portsmouth Teacher Corps Project, are conducting studies to address curriculum, instructional, and learning problems. For example, a great deal of attention is being placed on competency testing throughout the country. What is competency testing? Who determines what competencies students must master? How are competencies measured? How are competencies defined? How are competency tests designed? Who designs competency tests? How are they used to help children? John Stokel and Marian Fritz, Portsmouth Junior High School mathematics teachers, are concerned about these questions and have translated their concerns into a compre-

hensive, ongoing research study involving the use of computers and a humanistic approach to working with students. Both of these teachers, while taking a graduate course on tests and measurements, decided to do something about competency testing so that each individual student would be the beneficiary of testing. Their study is generating data which will eventually help individual students in the mathematics program and improve tests so that they can be used as tools to help students rather than to label them.

Inappropriate student behavior is a concern for many classroom teachers but especially for Lorna Healey who is responsible for providing instruction for special needs students. Lorna is interested in studying ways for helping students develop more positive classroom behavior. With her colleagues, she has developed an approach using a combination of learning reinforcements and individualized instruction to change the inappropriate behavior of one of her students. Currently, she is writing a case study which provides rich detail identifying the various factors that influence behavior and indicating how these factors can be dealt with in changing behavior. Her case study will yield useful observations for all those interested in helping special needs youngsters realize their potential.

Bob Blomquist, an eighth grade mathematics teacher, is studying the question of how teaching and learning styles can be appropriately matched to improve instruction for junior high school students. Through computerized library-searches and extensive reading, he has conducted a comprehensive review of all the literature dealing with teaching and learning styles. From this review, he hopes to generate a process which will enable teachers to analyze teaching and learning styles and to match the teaching style most appropriate for each individual student's learning style. His review of the literature already has proved to be of great value and demonstrates that bringing together previous research can be very useful for the classroom teacher who

wants to reach each student.

Writing is an area of national concern and Sandra Woodworth, an English teacher, has shared that concern for several years. She is very much interested in improving instruction in writing and is studying the professional literature to determine the most valid approaches for assessing a student's writing and the most effective ways of teaching writing. She has already conducted a preliminary study on the perceptions students have of what constitutes good writing. Her study focuses on student interests and perceptions and how these can be best assessed and used in generating solid writing skills.

Lois Cynewski has long been interested in an individualized and independent learning approach to home economics. She has developed a large number of independent learning packages which she is using and revising in the home economics curriculum. Her study focuses on what she has learned in developing her unique approach and how her findings can be used by other home economics teachers who are concerned about reaching boys and girls of junior high school age so that they will master some basic life skills. She has conducted a study on reading levels of home economics instructional materials, has developed a collection of recipes which appeal to junior high school age students, and has designed a thorough, systematic, and carefully thought out approach for promoting independent learning in home economics. Her work will be of great value to junior high home economics teachers and contains many concrete ideas which she has carefully evaluated.

How do you evaluate the teaching performance of an instructor who has implemented an individualized and open approach to education? Concerned about this question, Peter Frechette designed an evaluation system which incorporates student evaluation, self-evaluation, and supervisor evaluation of the teacher using an individualized approach to instruction. He tested this evaluation system and evaluated it collecting data from students, colleagues, and the prin-

cipal. His study includes a number of instruments which can be used by other teachers who are individualizing and who wish to have their performance evaluated within the context of a philosophy of individualization. Among the instruments included in this study are Student Assessment of Instruction, Instructor Self-Evaluation, and an Observational Form for Assessing Individualized Instruction. How these instruments are used and the process of evaluation is described in Peter Frechette's study which should be of great interest to principals and teachers concerned about alternative approaches to teacher evaluation.

Jean Woodworth, an English teacher, during the past two years has been introducing a number of changes in her classroom. She is studying how effective these changes have been in improving the classroom learning climate and the effectiveness of instruction. She has introduced a system of peer observation and feedback to improve classroom climate, small group and individualized learning approaches, the use of student journals to record personal reactions about learning and moral dilemmas to generate moral sensitivity and ideas for group discussion and student writing. Jean has also redesigned her classroom to facilitate structured and non-structured approaches to teaching. Her study documents the implementation of these approaches and their impact on student learning and growth.

Jean Arsenault, a home economics teacher, has been trying out individualized learning capsules and is concerned about the effectiveness of these capsules in meeting the individual needs of boys and girls in heterogeneously grouped home economics classes. She has documented the introduction and implementation of these capsules and describes how they have been revised and their impact on student learning. Included in her research is a diagnostic tool which helps her and her students in identifying the appropriate learning capsules to be used with each student. Her study evaluates the effectiveness of this approach and will offer a guide in a number of recommendations for teachers who wish to im-

plement a similar approach in home economics.

Peer teaching has generated a number of research findings which appear in the professional literature. Bernie Smith, a mathematics teacher, during the past two years has implemented a peer tutoring program which requires identification and training of student instructors and the development of an effective management system for using student instructors. He is comparing the effectiveness of this approach with other approaches to teaching mathematics and is collecting data to determine the impact of peer tutoring, not only on learning but also on the attitude of junior high students toward themselves and their peers. He is collecting this data primarily through a questionnaire format which includes objective and open-ended items for collecting data about the results of peer tutoring on the affective and cognitive aspects of learning.

An intriguing question for some teachers is how an individualized approach to instruction can be introduced into their classrooms while other more traditional approaches are maintained. Sue Parr, a social studies teacher, is studying the problems and the effects of partial individualization of her social studies curriculum. For two or three days a week, she individualizes her classroom, and for the other days she uses more traditional group-centered approaches. She has developed a number of curriculum units to facilitate partial individualization and is addressing the question of how to get students to use learning stations in the social studies curriculum. Sue has designed several learning stations which, in combination with her curriculum units, will constitute the main thrust of her partial individualization program. Her research documents this approach and its effects on student learning.

Walter Barrett and Louise Novak are using a multi-level individualized approach to teaching mathematics. Their approach is characterized by a great deal of flexibility which enables students to move in and out of different levels of mathematics according to their interests and abilities. They designed

their pilot program to meet the needs of all junior high school students in their math classes. They have already collected preliminary data which indicates, from the students' point of view, that their approach is working. Currently, they are collecting data from 150 junior high school students to determine how students feel about multi-level individualized instruction. The results of their study should prove to be of great value to junior high school mathematics teachers who are concerned about reaching all students regardless of their background and ability.

Ronald Fortier, a social studies teacher, is interested in simulation theory and how it can be translated into practical approaches to facilitate moral development. He has designed several simulations which he is testing out in his social studies classroom. The design of the simulations requires an extensive review of the professional literature and a careful consideration of how simulation theory could be best implemented in real ways within the context of a junior high school social studies curriculum. His research reviews the professional literature, describes the design and implementation of his simulations, and evaluates the impact of the simulations on student learning.

Collectively, all these teachers are demonstrating the value of action research in addressing instructional and learning problems. The processes of adapting research and conducting school problem-centered research constitute one of the best ways to improve learning for students. The teachers at Portsmouth Junior High carrying out the studies described here give evidence of the commitment and involvement of professionals who are continually learning, innovating, and evaluating to enhance the learning of their students. Finally, they are demonstrating that action research is a powerful form of staff development.

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